July 2, 2018

Ann Bailey, Chief
ENERGY STAR Labeling Branch
US Environmental Protection Agency

Via e-mail: roofproducts@energystar.gov

Dear Ms. Bailey:

The EPDM Roofing Association (ERA) represents the country's largest manufacturers of both white and black commercial roofing membranes and we strive to provide government officials, architects, and design professionals with solid and credible information that allows them to make educated decisions. No one product is ideally suited for every building or climate, which is why our members manufacture a wide variety of products to provide optimal solutions for each building's unique needs.

It is precisely because of our members experience with the roofing industry that we submit these comments in favor of the EPA's proposed repeal of the ENERGY STAR Specification for Roof Products Program. The ENERGY STAR label and specification played a critical role at the time of its launch in 1999, jumpstarting demand for cool roofs. It also brought the necessary attention to the long underappreciated role that roofs can have on overall building performance. Twenty years later, however, it is clear that the Program has been surpassed, in many instances, by commercial and residential building codes, high performance certification standards like LEED, and evolving building performance experience that allows building science to inform designers and architects on best product utilization for a particular climate and building.

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This letter strongly supports EPA's rationale for sun setting ENERGY STAR for roof products as set out below. Because the agency has so well-articulated those reasons, ERA is including verbatim the bulk of the EPA's stated rationale below:

"Under certain circumstances, EPA makes the determination that an ENERGY STAR specification for a particular product category should be sunset rather than revised. Some or all of the following factors play into such a decision:

- *Additional, cost-effective efficiency gains are not available or anticipated*
- *A standard exists or is forthcoming at the current ENERGY STAR level that will serve as a backstop so efficiency gains are maintained*
- *The market has evolved such that the product type is being discontinued*

For this product category, EPA has determined that two of these factors exist. For commercial roof products, state building codes and industry practice are widely in use and serve as a backstop for efficiency. For residential roof products, EPA has concluded that current binary label approach falls short of guiding consumers to the most cost-effective choice specific to improving the efficiency of their home envelope. Rather, tailored regional guidance would better serve the consumer

<u>*Rationale for Proposed Sunset*</u>
Commercial Roofs: Efficient commercial roofing, initially driven by ENERGY STAR, is now driven by codes and voluntary building standards, as well as standard design practices nationally. Commercial buildings codes in all but five US states include requirements for roofs. Further, highly reflective commercial roofs are now part of the mind-set for designers, contractors and building owners in climate zones across the majority of the south. Many states and municipalities have adopted IECC 2010, 2012, or 2015 or ASHRAE 90.1-2007, 90.1-2010, or 90.1-2013 as their building

codes, meaning their standards for roof products on commercial buildings are stricter than the ENERGY STAR Roof Products Version 3 specification in climate zones where reflective roofs are beneficial (Zones 1-3).

Residential Roofs: Discussion with stakeholders including brand owner partners, distributors/retailers, certification bodies, and energy efficiency Program sponsors revealed that reflective roofing is not the best choice for efficiency for many climates and homes. While reflectivity is helpful in hot climates, it is counter-productive in cold climates. EPA also found that the cost premium is high for preferred darker residential roof materials, approximately $0.55 per square foot. Attic air sealing, increasing attic insulation levels, and insulating ducts are very often more cost effective than an ENERGY STAR residential roof and deliver benefit in both heating and cooling climates. In the face of all this complexity, there has been low adoption of ENERGY STAR residential roofs in all areas except California, where cool roofing is mandated by Title 24."

In hot and sunny climates, the logic of cool roofs to save energy is generally accepted, although the effect diminishes with greater insulation levels and so do some benefits. However, in northern climates, the heating penalty virtually always outweighs or offsets the cooling benefit and moisture control or condensation risks are greater than experienced in conventional black roof membranes. This reality necessitates a "very selective use" approach for cool roofs. Such an approach strives to identify the limited cases where specific end use conditions may provide a benefit while also considering appropriate measures like the addition of air/vapor barriers to mitigate increased moisture accumulation risks. For cool roofs in northern climates, one has to understand the heating penalty, moisture accumulation potential as well as the other performance trade-offs associated with their selection and use.

Good roofing practice must be the dominant criterion in any roof design. The licensed design professional, an Architect/Engineer, has long-term experience and access to science to effectively weigh the broad variety of issues that inform the choice of a roofing membrane. These include not only the color of the membrane, but also issues such as the durability of the membrane, the method of attaching the membrane, the choice of insulation,

and the use of air or vapor barriers. Ultimately, the licensed designer should be relied upon to make the correct roof system design choices, including that of roofing membrane for any individual building project.

Additionally, sunsetting the ENERGY STAR Specification for Roof Products Program will most likely help to strengthen the physical performance of buildings in the face of future threats. This past year is on record, as reported by FEMA, for being the most expensive year for extreme weather and natural disaster events that affected roughly 25.8 million people and exceeded $2 billion in disaster assistance. While there is debate about the cause of this increase in extreme weather, there is overwhelming agreement that it will continue. Given the compelling need to create a resilient built environment, it is clear that design decisions must be made by local individuals responding to the best climate and weather information that informs their specific challenges. A government program urging the use of one particular color in all applications could run contrary to the protection of life and property in the face of these emerging threats.

Based on the unmatched experience of our members in the development and use of roofing products, combined with our awareness of the need for resilient design tailored to the specific threats encountered in varying geographic areas of the U.S., we strongly endorse the proposed phaseout of the Energy Star Roofing Products Program.

Respectfully submitted,

Louisa Hart
Director of Communications
EPDM Roofing Association
1020 19th Street NW Suite 650
Washington D.C. 20036